

### ABSTRACT

Extremely hydrophobic nitric oxide (NO) releasing polymers are disclosed. The extremely hydrophobic NO-releasing polymers provided are extensively cross-linked polyamine-derivatized divinylbenzene diazeniumdiolates. These polymers can be loaded with extremely high NO levels and designed to release NO in manners than mimic natural biological systems. The NO-releasing extremely hydrophobic polymers provided can maintain a sustained NO release for periods exceeding nine months. Also provided are related medical devices made using these NO-releasing extremely hydrophobic polymers.